R307. Environmental Quality, Air Quality.
R307-405. Permits: Prevention of Significant Deterioration of Air Quality (PSD).
R307-405-1. Definitions.

The following additional definitions apply to R307-405:

"Baseline Area" means any intrastate area (and every part thereof) designated as attainment or unclassifiable under Section 107(d)(1)(D) or (E) of the federal Clean Air Act in which the major source or major modification establishing the minor source baseline date would construct or would have an air quality impact equal to or greater than 1 ug/m3 (annual average) of the pollutant for which the minor source baseline date is established.

- (1) Area redesignations under section 107(d)(1) (D) or (E) of the federal Clean Air Act cannot intersect or be smaller than the area of impact of any major stationary source or major modification which:
 - (a) Establishes a minor source baseline date; or
- (b) Is subject to 40 CFR 52.21 or R307-405, and would be constructed in the same state as the state proposing the redesignation.

"Baseline Concentration" means that ambient concentration level which exists in the baseline area at the time of the applicable minor source baseline date.

"Major Modification" means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Clean Air Act.

- (1) Any net emissions increase that is significant for volatile organic compounds shall be considered significant for ozone.
- (2) A physical change or change in the method of operation shall not include:
 - (a) routine maintenance, repair, and replacement;
- (b) use of an alternative fuel or raw material by reason of an order under section 2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation), or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;
- (c) use of an alternative fuel by reason of an order or rule under section 125 of the Clean Air Act;
- (d) use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;
- (e) use of an alternative fuel or raw material by a source which:

- (i) the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition; or
 - (ii) the source is approved to use;
- (f) an increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition;
 - (g) any change in ownership at a source
- (h) the addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the executive secretary determines that such addition, replacement, or use renders the unit less environmentally beneficial, or except:
- (i) when the executive secretary has reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I of the Clean Air Act, if any, and
- (ii) the executive secretary determines that the increase will cause or contribute to a violation of any national ambient air quality standard or PSD increment, or visibility limitation.
- (i) the installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:
 - (i) the Utah State Implementation Plan; and
- (ii) other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
- (j) the installation or operation of a permanent clean coal technology demonstration project that constitutes repowering, provided that the project does not result in an increase in the potential to emit of any regulated pollutant emitted by the unit. This exemption shall apply on a pollutant-by-pollutant basis.
- (k) the reactivation of a very clean coal-fired electric utility steam generating unit.

"Major Source" means:

(1) any of the following sources of air pollutants which emits, or has the potential to emit, 100 tons per year or more of any pollutant subject to regulation under the Clean Air Act: Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), kraft pulp mills, portland cement plants, primary zinc smelters, iron

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and steel mill plants, primary aluminum ore reduction plants,
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    primary copper smelters, municipal incinerators capable of
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    charging more than 250 tons of refuse per day, hydrofluoric,
    sulfuric, and nitric acid plants, petroleum refineries, lime
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    plants, phosphate rock processing plants, coke oven
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    batteries, sulfur recovery plants, carbon black plants
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    (furnace process), primary lead smelters, fuel conversion
    plants, sintering plants, secondary metal production plants,
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    chemical process plants, fossil fuel boilers (or combination
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    thereof) totaling more than 250 million British thermal units
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    per hour heat input, petroleum storage and transfer units
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    with a total storage capacity exceeding 300,000 barrels,
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    taconite ore processing plants, glass fiber processing
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    plants, and charcoal production plants;
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- (2) any other source which emits, or has the potential to emit, 250 tons per year or more of any air pollutant; or
- (3) a source which does not otherwise qualify as a major source as defined in this paragraph, but which is physically changed, which change itself would constitute a major source.
- (4) a source which is major for volatile organic compounds is major for ozone.
- (5) The fugitive emissions and fugitive dust of a stationary source shall not be included in determining for any of the purposes of this section whether it is a major stationary source, unless the source belongs to one of the following categories of stationary sources:
 - (a) Coal cleaning plants (with thermal dryers);
 - (b) Kraft pulp mills;
 - (c) Portland cement plants;
 - (d) Primary zinc smelters;
 - (e) Iron and steel mills;
 - (f) Primary aluminum ore reduction plants;
 - (g) Primary copper smelters;
- 35 (h) Municipal incinerators capable of charging more 36 than 250 tons of refuse per day;
 - (i) Hydrofluoric, sulfuric, or nitric acid plants;
- 38 (j) Petroleum refineries;
 - (k) Lime plants;
 - (1) Phosphate rock processing plants;
 - (m) Coke oven batteries;
 - (n) Sulfur recovery plants;
- 43 (o) Carbon black plants (furnace process);
 - (p) Primary lead smelters;
 - (q) Fuel conversion plants;
- 46 (r) Sintering plants;
- 47 (s) Secondary metal production plants;

- (t) Chemical process plants;
- (u) Fossil-fuel boilers (or combination thereof)
 totaling more than 250 million British thermal units per hour
 heat input;
- (v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
 - (w) Taconite ore processing plants;
 - (x) Glass fiber processing plants;
 - (y) Charcoal production plants;
- (z) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;
- (aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Federal Clean Air Act.

R307-405-2. Area Designations.

All areas of the State shall be designated as Class I, II, or III.

- (1) Pursuant to section 162(a) of the federal Clean Air Act the following areas are designated as mandatory Class I:
 - (a) Arches National Park
 - (b) Bryce Canyon National Park
 - (c) Canyonlands National Park
 - (d) Capitol Reef National Park
 - (e) Zion National Park
- (2) Pursuant to section 162(b) of the federal Clean Air Act, all other areas of the State are designated as Class II unless redesignated as provided in R307-405-3 or are designated as nonattainment areas.

R307-405-3. Area Redesignation.

- (1) Within the restrictions and requirements of this paragraph, the Board may submit to the Governor for decision a recommendation to redesignate areas from any class to any other class.
- (2) In accordance with Section 162(a) of the federal Clean Air Act, areas designated as Class I under R307-405-2 may not be redesignated.
- (3) In accordance with Section 164(a) of the federal Clean Air Act, the following areas may be redesignated only as Class I or II.
- (a) An area which as of August 7, 1977, exceeded 10,000 acres in size and was a national monument, a national primitive area, a national preserve, a national recreation area, a national wild and scenic river, a national wildlife refuge, a national lakeshore or seashore; and

- (b) A national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acres in size.
- (4) Except as provided in (2), (3) and (6) the Board may submit to the Governor for decision a recommendation to redesignate areas of the State as Class III if:
- (a) There has been compliance with the requirements of (5) below.
- (b) Such redesignation will not cause, or contribute to, concentrations of any air pollutant which exceed any maximum allowable increase permitted under the classification of any other area or any national ambient air quality standard; and
- (c) Any permit application for any major source or major modification which could receive an approval order only if the area in question were redesignated as Class III, and any material submitted as part of that notice of intent were available, insofar as practicable, prior to any public hearing or redesignation.

In accordance with Section 164 of the federal Clean Air Act, redesignations to Class III may be approved by the Governor only after consultation with appropriate committees of the legislature and if units of local government representing a majority of the residents of the proposed area to be redesignated enact ordinances concurring in the redesignation.

- (5) Prior to submittal to the Governor of a recommendation to redesignate any area:
- (a) Notice shall be published in each daily newspaper in the affected area and written notice shall be made to local government units, other states, Indian governing bodies, Federal Land Managers whose lands may be affected by the proposed redesignation and public hearings shall be conducted in the affected areas. Such notice shall be made at least 30 days prior to the public hearing and include a statement of the availability of the discussion outlined in (b) below. Prior to the issuance of a notice under this paragraph respecting the redesignation of any Federal lands, a written notice shall be given to the appropriate Federal Land Manager who shall be afforded opportunity (not to exceed 60 days) to confer with the Board respecting the redesignation and to submit written comments and recommendations. In recommending redesignation of any area with respect to which a Federal Land Manager has submitted comments the Board shall publish a list of any inconsistency between such redesignation and such comments and recommendations together with the reasons for recommending

such redesignation against the recommendation of the Federal Land Manager; and

- (b) A discussion of the reasons for the proposed redesignation, including a satisfactory description and analysis of the health, environmental, economic and social and energy effects of the proposed redesignation, will be prepared and made available for public inspection at least 30 days prior to the hearing. Any person who petitions the Board for redesignation of an area may be required to prepare and submit this analysis to the Board.
- (6) Lands within the exterior boundaries of reservations of federally recognized Indian Tribes may be redesignated only by the appropriate Indian body as provided in Section 164 of the Clean Air Act.

R307-405-4. Increments and Ceilings.

(1) In Class I, II, or III areas, the maximum allowable increases in concentrations of sulfur dioxide, nitrogen dioxide and particulate matter over baseline concentrations of such pollutants are limited to the following:

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Annual Arithmetic Mean

(1) Maximum Allowable Increase (ug/m3) Pollutant Class I Class II Class III PM10: Annual Arithmetic Mean 24-hr. Maximum Sulfur Dioxide: Annual Arithmetic Mean 24-hr. Maximum 3-hr. Maximum Nitrogen Dioxide:

Note (1): At any one location, the maximum allowable increase for other than the annual period may be exceeded once each year. For any period other than the annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one location.

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(2) Variances to Class I areas will be allowed only after compliance with the requirements of and within the increments provided in Section 165 of the federal Clean Air Act, or in the case of PM10 increments, only after compliance with the Title 40 of the Code of Federal Regulations, Section

51.166(p)(4) (as amended-see the June 3, 1993 Federal Register notice, $58\ FR\ 31637)$ which is hereby incorporated by reference.

- (3) In any area, no resultant concentration of any air pollutant shall exceed the concentration permitted under either the national secondary or primary ambient air quality standard whichever concentration is lowest for the pollutant for a period of exposure.
- (4) Exclusions from increment consumption. The following concentrations shall be excluded in determining compliance with a maximum allowable increase:
- (a) Concentrations attributable to the increase in emissions from sources which have converted from:
- (i) the use of petroleum products, natural gas, or both by reason of an order in effect under sections 2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974; or
- (ii) using natural gas by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act, over the emissions from such sources before the effective date of such an order or plan.

No exclusion of such concentrations shall apply more than five years after the effective date of the order or the plan. If both an order and plan are applicable, no such exclusion shall apply more than five years after the later of such effective dates.

- (b) Concentrations of PM10 attributable to the increase in emissions from construction or other temporary emission-related activities.
- (c) Concentrations attributable to the temporary increase in emissions of sulfur dioxide, nitrogen oxides or PM10 from sources which are affected by plan revisions approved by EPA as meeting the criteria specified in 40 CFR 51.166(f)(4).

R307-405-5. Baseline Concentration and Date.

- (1) Baseline concentration. A baseline concentration is determined for each pollutant for which a minor source baseline date is established and shall include:
- (a) The actual emissions representative of sources in existence on the applicable minor source baseline date except as provided in (2) below;
- (b) The allowable emissions of major sources which commence construction before the major source baseline date, but were not in operation by the applicable minor source baseline date.

- (2) The following will not be included in the baseline concentration and will affect the applicable maximum allowable increase(s):
- (a) actual emissions from any major source on which construction commenced after the major source baseline date, and
- (b) actual emissions increases and decreases at any source occurring after the minor source baseline date.
- (3) Baseline date. The minor source baseline date is established for each pollutant for which increments or other equivalent measures have been established if:
- (a) the area in which the proposed source or modification would construct is designated as attainment or unclassifiable under section 107(d)(i)(D) or (E) of the federal Clean Air Act for the pollutant on the date of its complete application under 40 CFR 52.21, or R307-405; and
- (b) in the case of a major source the pollutant would be emitted in significant amounts, or, in the case of a major modification, there would be a significant net emissions increase of the pollutant. With respect to particulate matter, significant shall mean significant for PM10.
- (4)(a) Any minor source baseline date established originally for increments of total suspended particulates shall remain in effect and shall apply for purposes of determining the amount of available PM10 increments, except that the executive secretary may rescind any such minor source baseline date where it can be shown to the executive secretary's satisfaction that the emissions increase from the major stationary source or the net emissions increase from the major modification responsible for triggering that date did not result in a significant amount of PM10 emissions.
- (b) Any baseline area established originally for the increments of total suspended particulates shall remain in effect and shall apply for purposes of determining the amount of available PM10 increments, except that such baseline area shall not remain in effect if the executive secretary rescinds the corresponding minor source baseline date in accordance with(a) above.

R307-405-6. PSD Areas - New Sources and Modifications.

(1) Emission Limitations. Any source constructed or modified in a PSD area must meet all applicable emissions requirements of R307 and the Utah State Implementation Plan. A proposed source or modification which is not a major source or major modification may be approved without meeting the requirements in (2) below, provided such source meets all other applicable requirements of these regulations. The

emission limitations shall be stated as conditions of the approval order.

- (2) Major Source and Major Modification Review. Every new major source or major modification must be reviewed by the Executive Secretary to determine the air quality impact of the source to include a determination whether the source will cause or contribute to a violation of the maximum allowable increases or the NAAQS in any area. The determination of air quality impact will be made as of the source's projected start-up date. Such determination shall take into account all allowable emissions of approved sources or modifications whether constructed or not, and, to the extent practicable, the cumulative effect on air quality of all sources and growth in the affected area.
- (a) In addition to meeting all other requirements of these regulations, any major source or major modification which would be constructed in a PSD area, shall:
- (i) Provide the following additional information with the notice of intent required pursuant to R307-401:
- (A) An analysis of the air quality impact of the source or modification and a demonstration that allowable emissions increases from the source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), will not cause or contribute to a violation of any maximum allowable increase over the baseline concentration in any area or any NAAQS in any area.
- (B) An analysis of ambient air quality in the affected area for each pollutant that a new source would have the potential to emit in a significant amount, and for each pollutant for which a modification would result in a significant net emissions increase. With respect to any such pollutant for which no NAAQS exists, the analysis shall contain such air quality monitoring data as the Executive Secretary determines is necessary to assess ambient air quality for that pollutant in any area that the emissions of that pollutant would affect. With respect to any such pollutant (other than non-methane hydrocarbons) for which such a NAAQS does exist, the analysis shall contain continuous air quality monitoring data gathered for purposes of determining whether emissions of that pollutant would cause or contribute to a violation of the standard or any maximum allowable increase in any area that the emissions of that pollutant would affect. In general, the continuous air quality monitoring data that is required shall have been gathered over a period of at least one year and shall represent at least the year preceding receipt of the notice of intent, except that, if the Executive Secretary determines

that a complete and adequate analysis can be accomplished with monitoring data gathered over a period shorter than one year (but not to be less than four months), the data that is required shall have been gathered over at least that shorter period. Any data used in the analysis must be gathered using EPA reference methods or equivalent and quality assurance procedures equivalent to 40 CFR Part 58, Appendix B. A monitoring plan will be submitted to the Executive Secretary for approval prior to data collection. The Executive Secretary may grant exceptions or modifications to these monitoring requirements when not inconsistent with federal law.

- (C) Upon request of the Executive Secretary, the air quality impact of the source or modification, including meteorological and topographical data necessary to estimate such impact; and the air quality impact of any or all general commercial residential, industrial, and other growth which has occurred since the minor source baseline date in the area the source or modification would affect.
- (D) An analysis of the air quality related impact of the source or modification including an analysis of the impairment to visibility, soils, and vegetation and the projected air quality impact from general commercial, residential, industrial, and other growth associated with the source or modification. The owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value.
- (ii) After construction of the source or modification, conduct such ambient air quality monitoring as the Executive Secretary determines may be necessary to establish the effect which the emissions from the source or modification may have on the air quality in any area.
- (b) If the Executive Secretary finds that the emissions from a proposed major source or major modification would cause a violation of any maximum allowable increase over the baseline concentration in any area, the Executive Secretary shall approve the proposed source if and only if:
- (i) the new source or modification is required to meet a more stringent emission limitation sufficient to avoid a violation of the maximum allowable increase and/or
- (ii) the new source or modification has acquired sufficient offset to avoid a violation of the maximum allowable increase, and
- (iii) the new emission limitations for the proposed source and for any affected existing sources are enforceable.
- (c) If the Executive Secretary finds that the emissions from a proposed major source or major modification would

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contribute to a known violation of any maximum allowable increase over the baseline concentration in any area, the Executive Secretary shall approve the proposed source if and only if:
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- (i) the new source or modification has acquired sufficient emission offset so as to provide a positive net air quality benefit in the affected area, and
- (ii) any new emission limitations for affected existing sources are enforceable.
- (3) The requirements of (2)(a) above shall not apply to a major source or major modification if:
- (a) The source is a portable stationary source which has previously received a permit under this paragraph, and
- (i) The owner or operator proposes to relocate the source and emissions of the source at the new location would be temporary; and
- (ii) The emissions from the source would not exceed its allowable emissions; and
- (iii) The emissions from the source would impact no Class I area and no area where an applicable increment is known to be violated;
- (b) The source or modification would be a non-profit health or non-profit educational institution and the Board approves a request that it be exempt from those requirements.
- (c) The source or modification would be a major source or major modification only if fugitive emission and fugitive dust, to the extent quantifiable, are considered in calculating the potential to emit of the source or modification and the source does not belong to any of the following categories:
 - (i) Coal cleaning plants (with thermal dryers);
 - (ii) Kraft pulp mills;
 - (iii) Portland cement plants;
 - (iv) Primary zinc smelters;
- 35 (v) Iron and steel mills;
 - (vi) Primary aluminum or reduction plants;
 - (vii) Primary copper smelters;
 - (viii) Municipal incinerators capable of charging more than 250 tons of refuse per day;
 - (ix) Hydrofluoric, sulfuric, or nitric acid plants;
 - (x) Petroleum refineries;
 - (xi) Lime plants;
- 43 (xii) Phosphate rock processing plants;
- 44 (xiii) Coke oven batteries;
- 45 (xiv) Sulfur recovery plants;
- 46 (xv) Carbon black plants (furnace process);
- 47 (xvi) Primary lead smelters;

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         (xvii) Fuel conversion plants;
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         (xviii) Sintering plants;
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         (xix) Secondary metal production plants;
         (xx) Chemical process plants;
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         (xxi) Fossil-fuel boilers (or combination thereof)
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    totaling more than 250 million British thermal units per hour
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    heat input;
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         (xxii) Petroleum storage and transfer units with a
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    total storage capacity exceeding 300,000 barrels;
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         (xxiii) Taconite ore processing plants;
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         (xxiv) Glass fiber processing plants;
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         (xxv) Charcoal production plants;
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         (xxvi) Fossil fuel-fired steam electric plants of more
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    than 250 million British thermal units per hour heat input;
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         (xxvii) Any other stationary source category which, as
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    of August 7, 1980, is being regulated under section 111 or
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    112 of the federal Clean Air Act.
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         (d) With respect to a particular pollutant, the
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    allowable emissions of that pollutant from the source, or the
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    net emissions increase of that pollutant from the
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    modification:
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         (i) would impact no Class I area and no area where an
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    applicable increment is known to be violated, and
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         (ii) would be temporary.
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         (4) The requirements of (2)(a) above as they relate to
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    any maximum allowable increase for a Class II area shall not
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    apply to a major modification at a source that was in
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    existence on March 1, 1978, if the net increase in allowable
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    emissions for each pollutant from the modification after the
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    application of best available control technology would be
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    less than 50 tons per year.
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         (5)(a) The requirements of (2)(a)(i)(A) above
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    pertaining to the impact analysis shall not apply to a source
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    or modification with respect to any maximum allowable
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    increase for nitrogen oxides if the owner or operator of the
    source or modification submitted a notice of intent before
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    October 15, 1990, and the Executive Secretary subsequently
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    determined that the notice of intent as submitted before that
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    date was complete.
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         (b) The requirements of (2)(a)(i)(A) above concerning
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    an analysis of the maximum allowable increase over the
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    baseline concentration shall not apply to a stationary source
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    or modification with respect to any maximum allowable
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    increase for PM10 if the owner or operator of the source or
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    modification submitted an application for a permit before
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    December 15, 1994, and the executive secretary subsequently
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determined that the application as submitted before that date

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was complete. Instead, the applicable requirements shall be with respect to the maximum allowable increases for total suspended particulates as in effect on the date the application was submitted. These increments were, for the annual geometric mean: 5, 19, and 37 micrograms/cubic meter for Class I, II and III areas respectively and, for the 24-hour maximum: 10, 37 and 75 micrograms/cubic meter for Class I, II and III areas respectively.
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- (6) Exemption Monitoring Requirement
- (a) The Executive Secretary may grant exceptions or modifications to the monitoring requirements in (2)(a)(i)(B) above which are not inconsistent with federal law.
- (b) The Executive Secretary may exempt a stationary source or modification from the requirements of (2)(a)(i)(B) above with respect to monitoring for a particular pollutant if:
- (i) The emissions increase of the pollutant from the new source or the net emissions increase of the pollutant from the modification would cause, in any area, air quality impacts less than the following amounts:

Carbon monoxide - 575 ug/m3, 8-hour average; Nitrogen dioxide - 14 ug/m3, annual average; PM10 - 10 micrograms/cubic meter, 24-hour average; Sulfur dioxide - 13 ug/m3, 24-hour average; Lead - 0.1 ug/m3, 24-hour average; Mercury - 0.25 ug/m3, 24-hour average;

Beryllium - 0.0005 ug/m3, 24-hour average; Ozone - No de minimis air quality level is provided for ozone. However, any proposed source or modification subject to PSD with net increase of 100 tons per year or more of

volatile organic compounds subject to PSD would be required to perform an ambient impact analysis including the gathering of ambient air quality data;

Fluorides - 0.25 ug/m3, 24-hour average;

Vinyl chlorides - 15 ug/m3, 24-hour average; Total reduced sulfur - 10 ug/m3, 1-hour average;

Hydrogen sulfide - 0.04 ug/m3, 1-hour average;

Reduced sulfur compounds - 10 ug/m3, 1-hour average; or

(ii) The concentrations of the pollutant in the area that the source or modification would affect are less than the concentrations listed or the pollutant is not listed in (i) above.

R307-405-7. Increment Violations.

Where the Board determines that an increment under R307-405-4 is violated, the Board shall promulgate a plan and implement regulations to eliminate the violation.

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R307-405-8. Banking of Emission Offset Credit in PSD Areas.

Banking of emission offset credits in PSD areas will be permitted. To preserve banked emission reductions the Executive Secretary must identify them in either the Utah SIP or an order and shall provide a registry to identify the person, private entity, or government authority that has the right to use or allocate the banked emission reduction and to record any transfer of or lien on these rights.

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11 KEY: air pollution, PSD, Class I area

- 12 July 12, 2001
- 13 Notice of Continuation August 11, 2003
- 14 19-2-104